

CLAIMS

What is claimed is:

Claim 1. A method for updating software in an electronic device, the method comprising:

generating an update package for updating at least one software application, the update package being generated based upon at least one reference software installed on the electronic device; and

updating the at least one software application using the update package.

Claim 2. The method according to claim 1, wherein generating an update package for updating the at least one software application based upon the at least one reference software installed on the electronic device comprises:

accessing a copy of the at least one reference software;

retrieving a copy of the at least one software application; and

generating an update package.

Claim 3. The method according to claim 1, wherein generating an update package for updating at least one software application based upon the at least one reference software installed on the electronic device comprises:

accessing a copy of the at least one reference software;

retrieving a copy of each of multiple versions of the at least one software application; and

generating an update package comprising all transitions between the retrieved versions of the at least one software application.

Claim 4. The method according to claim 1, further comprising updating multiple update versions of the at least one software application installed on the electronic device is performed using a single update package.

Claim 5. The method according to claim 1, further comprising installing the at least one software application and the at least one reference software as part of a single installation.

Claim 6. The method according to claim 1, further comprising updating the at least one reference software and updating the at least one software application as part of a single update.

Claim 7. The method according to claim 1, wherein the at least one software application comprises a plurality of software applications, and the at least one reference software comprises a plurality of reference software.

Claim 8. The method according to claim 7, further comprising:
identifying a software application needing updating from the plurality of software applications installed on the electronic device; and
identifying whether a reference software corresponding to the software application needing updating is present on the electronic device, wherein if the reference software is not present, then installing the software application and an associated reference software in a single update on the electronic device.

Claim 9. The method according to claim 7, further comprising:
identifying a software application needing updating from the plurality of software applications installed on the electronic device; and
identifying whether a reference software corresponding to the software application needing updating is present on the electronic device, wherein if the reference software is present, then
retrieving an update package for the software application needing updating;
verifying the update package; and
installing the update package on the electronic device.

Claim 10. The method according to claim 7, further comprising:
identifying a software application needing updating from the plurality of software applications installed on the electronic device;
determining if the update is needed immediately; and
storing the update until the update is needed immediately.

Claim 11. The method according to claim 10, wherein when the update is determined to be needed immediately, then

invoking an update agent to employ at least the stored update package and reference software; and

updating the software application with the update package.

Claim 12. A system for updating software, the system comprising:

an electronic device capable of having software installed thereon;

a software delivery device for receiving and installing a reference software to the electronic device if the electronic device does not have the reference software previously installed; and

the software delivery device receiving and delivering at least one update package to the electronic device, wherein the reference software facilitates, using the at least one update package, at least one update to application software installed on the electronic device.

Claim 13. The system according to claim 12, wherein the electronic device further comprises an update agent, the update agent being capable of employing the reference software in conjunction with any retrieved update package to generate updated versions of the application software and also being capable of updating a plurality of application software employing reference software associated with each application software.

Claim 14. The system according to claim 12, further comprising an update generating system, the update generating system comprising a loader manager, the loader manager:

managing loading of application software and application software version updates from the software delivery device;

employing a loader from a loader module; and

employing security services to authenticate software being delivered.

Claim 15. The system according to claim 14, wherein the loader manager further comprises an installation agent for installing application software and downloading files from the software delivery device.

Claim 16. The system according to claim 14, wherein the loader manager is adapted to:

- identify an application software needing updating;
- identify whether reference software associated with the application software needing updating exists; and
- coordinating an update of the application software and an associated reference software in a single update.

Claim 17. The system according to claim 14, wherein the loader manager is adapted to:

- retrieve the update package;
- access contents of the update package; and
- verify the update package.

Claim 18. The system according to claim 14, wherein the loader manager is adapted to determine immediacy of a needed update for a particular application software.

Claim 19. The system according to claim 12, wherein the software delivery device is one of a server, a CDROM, and a network.

Claim 20. The system according to claim 12, wherein the electronic device is one of a computer, a digital phone, and a digital camera.

Claim 21. A method for updating software in an electronic device, the method comprising:

- generating a first update package for updating at least one software application, the first update package being generated based upon difference information between first and second software versions;

- generating a second update package for updating the at least one software application, the second update package being generated based upon difference information between first and third software versions;

- generating a third update package for updating the at least one software application, the third update package being generated based upon difference information between the first and second update packages; and

- updating the at least one software application using the third update package.

Claim 22. A method for updating software in an electronic device, the method comprising:

- generating a first update package for updating at least one software application, the first update package being generated based upon difference information between a first software version and a reference software corresponding to the at least one software application;

- generating a second update package for updating the at least one software application, the second update package being generated based upon difference information a second software version and the reference software corresponding to the at least one software application;

- generating a third update package for updating the at least one software application, the third update package being generated based upon difference information between the first and second update packages; and

- updating the at least one software application using the third update package.

Claim 23. A system for updating software, the system comprising:
an electronic device capable of having software installed thereon;
a first update package generator for generating update packages based upon difference information between different versions of software;
a second update package generator for generating update packages based upon difference information between different update packages; and
a software delivery device for delivering at least one update package generated based upon difference information between different update packages to the electronic device.

Claim 24. A system for updating software, the system comprising:
an electronic device capable of having software installed thereon;
a first update package generator for generating update packages based upon difference information between a version of software and a reference software corresponding to at least one software application;
a second update package generator for generating update packages based upon difference information between different update packages; and
a software delivery device for delivering at least one update package generated based upon difference information between different update packages to the electronic device.